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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,856	12/21/2005	Arie Geert Koppelaar	NL 030701	1453
65913	7550	11/13/2008		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER CORRIELUS, JEAN B	
			ART UNIT 2611	PAPER NUMBER
			NOTIFICATION DATE 11/13/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/561,856

Applicant(s)

KOPPELAAR, ARIE GEERT

Examiner

Jean B. Corielus

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-15, 17-20-22 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Drawings

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1-10 are objected to because of the following informalities: please use proper article before "apparatus", recited in line 1 of each claim. Claim 1, line 1-2, recites an "apparatus" and "a receiver". However, it is noted that "the apparatus" and "the receiver" are the same device. Claim 1, line 7, "plurality" should be replaced by "polarity". Claim 3, line 3, "plurality" should be replaced by "polarity". As per claim 4, line 3 recites "a corresponding descrambler" suggesting a "scrambler" has been previously referenced. However, there is no such previous limitation to a "scrambler". Claim 5, line 5 recites "a corresponding despreaders" suggesting a "spreader" has been previously referenced. However, there is no such previous limitation to a "spreader". As per claim 10, line 2, there is no input provided to the descrambler. In addition, lines 2-3 suggest that the output of the descrambler is provided to the modulator and data despreaders. However, it is noted that the output of the scrambler is provided to the "modulator", the output of the modulator is provided to the data despreaders and the despreaders generate the training sequence. Claim 18 recites "at least one receiver" suggesting that such "at least one receiver" is provided in addition to the "receiver"

recited in claim 1. However is noted that only "the at least one receiver" and the "receiver" refer to the same device. Appropriate correction is required.

4. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation, recited in claim 13, has already been recited in claim 12 and therefore fails to further limit base claim 12.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 12, "a receiver" is vague and indefinite as there is an unclear antecedent in claim 1, line 2. Claims 13 and 14 are likewise rejected. In addition, claim 13, "a decoder" is vague and indefinite as there is an unclear antecedent in claim 12.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-3 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as

to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites an apparatus comprising a counter. Such claim, consequently, is considered as a single means since the "counter" does not seem to appear in combination with another recited element of means. Consequently, such claim is held nonenabling. See MPEP 2164.08(a). The same comment applies to claims 2-3 and 11

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 20-22 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Priority

11. It is noted that this application appears to claim subject matter disclosed in prior Application No. PCT/IB04/50941, filed 6/21/04. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be

accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

12. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on June 25, 2003. It is noted, however, that applicant has not filed a certified copy of the European application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-7, 11-15, 17-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al US patent application publication no. 20030147374 A1 in view of Tang et al US patent no. 7,403,539.

As per claim 1, Chiu et al teaches an apparatus fig. 2 for determining a frame format of data received by a receiver fig. 2 and paragraph 0014, lines 1-3, said frame format fig. 1A including a synchronization field 112 which defines said frame format as being of a first or second type 112a (Fig. 1B) or 112b (fig. 1C), the apparatus fig. 2 comprises a counter (208a) arranged to count a number of consecutive bits of the synchronization field of a received frame and determining, if said frame format is of said first or second type, where N is an integer greater than 1 see paragraph 0014 lines 10-18. However, Chiu et al does not teach the consecutive bits having the same plurality or logic value, and determining if said frame format is of said first or second type, depending on the polarity or logic value of said N consecutive bits. Tang et al teaches teach the consecutive bits having the same plurality or logic value, and determining if said frame format is of said first or second type, depending on the polarity or logic value of said consecutive bits see col. 10, lines 37-41. Given that fact, it would have been obvious to one skill in the art to modify Chiu by determining when a string of a

predetermined polarity has been counted because according to the teaching of Tang et al, each one of the long and short preamble is identifiable by a stream of same logic values. Hence, configure the counter of Chiu to determine when such a sequence has been received would have been in the purview of one skill in the art as such would have provided an effective and an efficient way to determine the frame type of the received signal.

As per claim 2, Chiu et al teaches said first frame format fig. 1A comprises a short frame format Fig. 1C with a synchronization field 112b having a first predetermined number of bits (56bits), and said second frame format fig. 1a comprises a long frame format fig. 1B with a synchronization field 112a having a second predetermined number of bits (128 bits), said second predetermined number (128 bits) being greater than said first predetermined number (56 bits) see fig.1B and fig. 1C.

As per claim 3, Chiu fails to teach said short frame format has a synchronization field comprising a first predetermined number of consecutive bits of a first plurality or logic value, and said second frame format has a synchronization field comprising a second predetermined number of consecutive bits of a second polarity or logic value, opposite to said first polarity or logic value. However as evidence by Tang et al at col. 10, lines 37-41, it is well known in the art to represent the first frame format with consecutive bits having a first polarity and representing the second frame format with a second polarity different from the first and the motivation would have been the same as provided above with respect to claim 1.

As per claim 4, fig. 2 show a descrambler 206 configured to descramble the received sync signal prior to providing the descrambled data to the counter 208a see paragraph 0033 and a corresponding scrambler to scramble the sync field prior to transmission is inherently provided because a descrambling operation requires a scrambling operation to take place beforehand.

As per claim 5, Chiu et al does not teach said data frame is spread by means of a direct sequence spread spectrum technique prior to transmission thereof, and said apparatus comprises a corresponding despreader to which said received data frame is applied prior to the data being passed to said counter. Tang et al teaches said data frame is spread by means of a direct sequence spread spectrum technique prior to transmission thereof see col. 8, lines 32-38, and said apparatus comprises a corresponding despreader to which said received data frame is applied prior to the data being passed to said detector see col. 8, lines 27-33. Given that fact, it would have been obvious to one skill in the art to have modified Chiu by despread the signal prior to being provided to the counter in order to undo the effect of spreading performed in the transmitter side. Note that Spread spectrum modulation provides added security so that unauthorized party does not access the information signal.

As per claim 6 Chiu does not teach that the signal is demodulated after despread. However, as shown by Tang et al fig. 2 element 3650, it is well known in the spread spectrum technology once a signal is despread other signal processing such as demodulation the despread signal can take place so as to recover the original signal. Hence it would have been obvious to one skill in the art to modify Chiu by demodulating

the signal after despreading and before counting by the counter so as to recover the original signal.

As per claim 7, Chiu does not teach that the demodulator is a DBPSK demodulator. Tang et al teaches that the demodulator is a DBPSK demodulator see fig. 2, element 375. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Chiu and the motivation would have been the same as provided with respect to claim 6.

As per claim 11, the receiver is a wireless receiver see paragraph 0024.

As per claim 12, Chiu teaches elements (202, 204, 206, 208, 212 and 210) considered as the claimed decoder and the decoder (202, 204, 206, 208, 212 and 210) includes the apparatus of claim 1.

As per claim 13, the receiver fig. 2 includes a decoder (202, 204, 206, 208, 212 and 210).

As per claim 14, Chiu does not teach an equalizer. Tang teaches an equalizer 355. It would have been obvious to one skill in the art to incorporate such a teaching in Chiu so as to remove interference from the signal so as to improve signal detection.

As per claim 15, Chiu does not teach an adaptive equalizer. Tang et al teaches that the equalizer is a DFE equalizer. DFE equalizer is by definition an adaptive equalizer. It would have been obvious to one skill in the art to implement the equalizer as an adaptive equalizer so as to set up its parameters such as tap coefficients based on condition of channel for better performance.

As per claim 17, see claim 11.

As per claim 18, the system includes a wireless LAN having a receiver for receiving frames see paragraph 0028, and the LAN inherently includes a transmitter for transmitting the signal.

As per claim 19, note that because the LAN is wireless, the transmitter and receiver have to be wireless.

As per claim 20, see claim 1.

As per claim 22, see claim 11.

Allowable Subject Matter

15. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Note that claim 8-10 must be further amended to overcome the objection set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/
Primary Examiner
Art Unit 2611